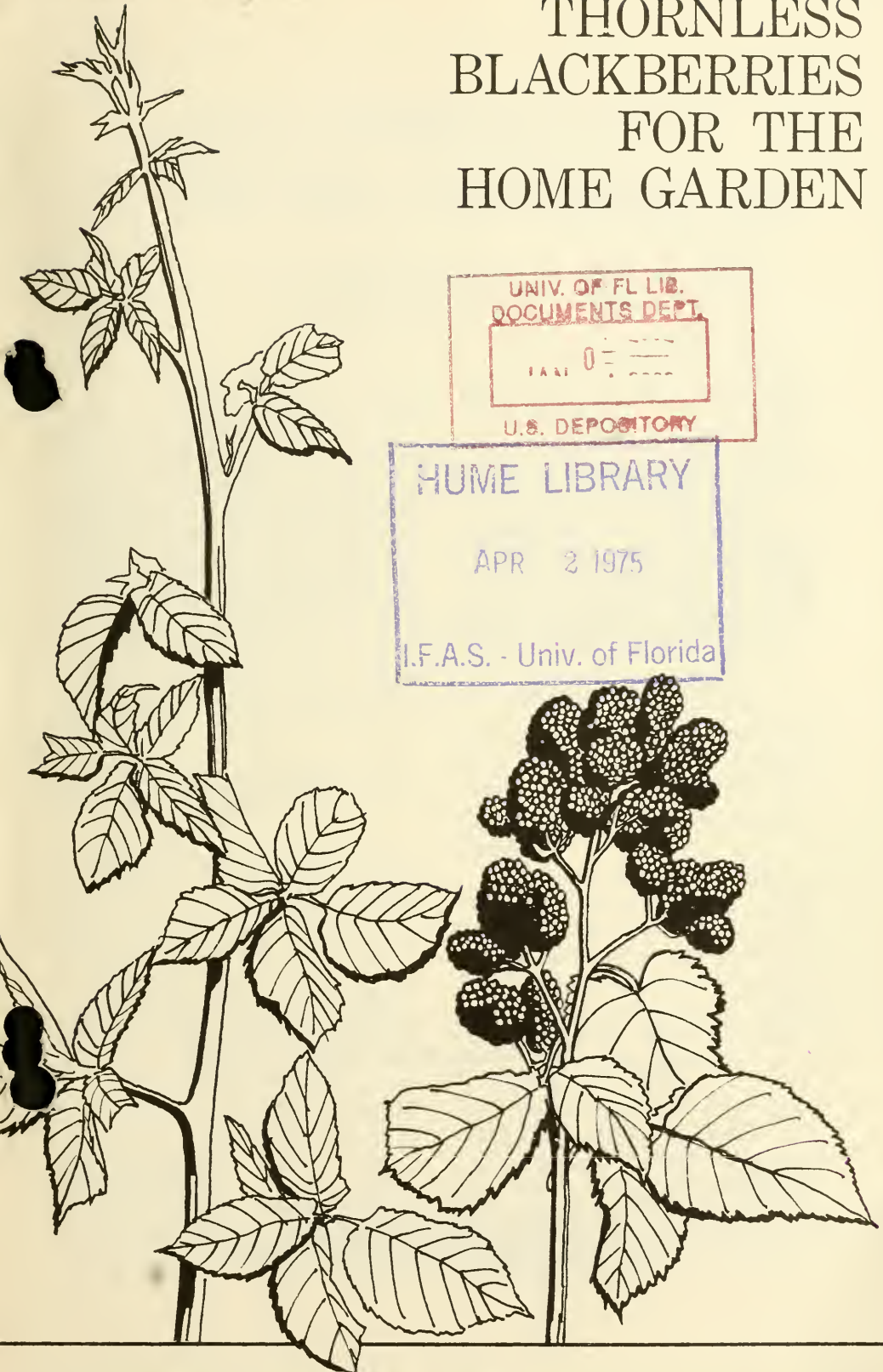


THORNLESS
BLACKBERRIES
FOR THE
HOME GARDEN



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Cover: *Thornfree blackberry plant. This plant requires little summer pruning, and is the most winter hardy thornless variety.*

Washington, D.C.

Issued May 1973

For sale by the Superintendent of Documents
U.S. Government Printing Office, Washington, D.C. 20402
Price 20 cents domestic postpaid or 10 cents GPO Bookstore
Stock Number 0100 - 02751

THORNLESS BLACKBERRIES FOR THE HOME GARDEN

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For years home gardeners hesitated to grow blackberries in their backyard because of the annoyance of the thorns. Then two thornless blackberry varieties—Smoothstem and Thornfree—were developed by the U.S. Department of Agriculture. Popular with home gardeners and proprietors of “you-pick” enterprises, these productive blackberries are easy to handle and require little summer pruning. The fruits are firm and highly flavored.

THORNLESS BLACKBERRY VARIETIES

Both Smoothstem and Thornfree are genetically thornless blackberries—all the cells are thornless. When new canes develop they retain this thornless characteristic.

Other thornless blackberries, such as Thornless Young, Thornless Logan, and Thornless Evergreen, have a thornless character only in the outer cell layer of their canes. New canes originating from their roots have thorns.

Thornless blackberries have trailing or semitrailing canes that are not self-supporting. They can be grown along the ground in their

first season, but, thereafter, must be trained on trellises.

Blackberries are planted in early spring in the North; in late winter or early spring in the South.

Blackberries vary in their ability to withstand cold, and none should be grown without special winter protection in areas where temperatures drop to 0° F. and below.

PLANTING SITES

Planting sites for blackberries must offer plenty of soil moisture. This condition is especially necessary while the fruit is growing and ripening.

Almost any soil type, except very sandy soil, is suitable for blackberries if the drainage is good—both on the surface and in the soil. Plants can be harmed at any season of the year if water stands around their roots.

Preparing the Soil

Prepare the soil as you would for a vegetable or flower garden.

If you are establishing a new planting, seed and plow under one or two green-manure crops of cowpeas or of rye and vetch. This will condition the soil, and the added or-

ganic matter and nitrogen will help produce an early fruit crop.

Spacing the Plants

Leave plenty of space between rows when planting blackberries, or severe competition for soil nutrients and moisture will result.

Smoothstem and Thornfree are vigorous varieties and should be set 6 to 8 feet apart in rows that are at least 8 feet apart.

Less vigorous varieties, such as Thornless Young and Thornless Logan, should be set 4 to 6 feet apart in rows that are at least 8 feet apart.

Aline plants carefully in the row to accommodate the trellis, which will be constructed. (See p. 2.)

Setting the Plants

Do not let planting stock dry out. This condition can be prevented by heeling in the roots.

To heel in, dig a trench in a shaded area deep enough to hold the roots. Open the bundles and spread the plants along the trench with the roots down. Cover the roots with moist soil and firm the soil down to eliminate air pockets.

If the plants are dry upon arrival, soak the roots in water for several hours before planting or heeling in.

If you do not plant immediately, wrap the plants in polyethylene bags and place them in a refrigerator until planting time.

Before setting the plants, cut the tops (the old cane or "handle") back to about 6 inches. This is useful for handling the plants and serves to mark their location.

After you make a planting hole, set the root of the plant so that it is

about the same depth as it was in the nursery, or slightly deeper. Then firm the soil carefully to assure good contact with the roots.

INTERCROPPING

During the first summer after setting the blackberries, vegetables such as beans, peas, or cabbage can be grown in the spaces between rows. Their cultivation will benefit the blackberry plants and put the unused portion of your garden to good use.

Intercropping should not be done more than once; when the blackberry plants are of bearing size they will need all available moisture and nutrients.

TRELLIS CONSTRUCTION

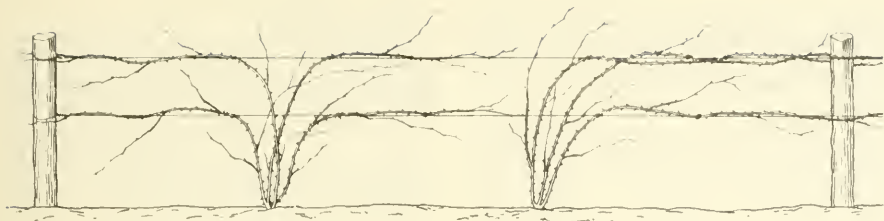
After the first season, thornless blackberries should be trained on trellises. This will assure clean fruit, ease of picking, and help in disease control.

Many trellis arrangements and training methods are satisfactory. To construct a simple and effective trellis—

- Stretch two wires (gage size 12 or 14) between end posts set 15 to 25 feet apart in the row. String one wire 2½ feet from the ground and the other about 5 feet from the ground.

- Staple the wires to all posts between the end posts. (Wires must be loose enough to allow for contraction in cold weather.)

- Tie trailing canes horizontally along the wires or fan them out from the ground and tie them where they cross each wire. Avoid tying the canes in bundles.



Thornless blackberries should be trained on a two-wire trellis. Set end posts 15 to 25 feet apart in the row. String one wire $2\frac{1}{2}$ feet from the ground and the other about 5 feet from the ground.

TRAINING

During the first year, blackberry canes grow vegetatively and send out side branches. In the second year, these canes bear fruit, and then the canes die. (The canes arising from the crown are biennial; they live for only 2 years. The roots and crowns are perennial.)

Methods of training blackberries largely depend on the length of the growing season and the degree of winter cold.

In northern areas, leave trailing varieties of thornless blackberry canes on the ground, under the trellis, until their second season. Then, before the buds swell, bring the canes up to the trellis wires, wrap them in groups of three or four, and tie.

Tie semitrailing blackberry varieties to the wires in their first year.

In the South, tie new canes of both trailing and semitrailing varieties to the trellis as soon as harvest is over and old canes have been removed.

PRUNING

After harvest, prune away old canes and destroy them as a sanita-

tion measure. In certain areas of the South anthracnose and rosette, both serious diseases of blackberries, threaten crops. In these areas, all the canes should be cut out after harvest.

Before tying canes to the trellis wire, remove any that are weak, spindly, or broken.

Thin out to leave 12 to 16 new canes. Tie these to wires, or depending on the management plan being used, leave them under the trellis for the rest of the season.

Thornfree and Smoothstem varieties require little summer pruning; they do not tend to branch freely and usually will not develop more than three or four canes.

Before growth starts in spring, prune all side branches back to 12 inches. Side branches that are pruned will produce larger fruit than those that are not pruned.

FERTILIZING AND WATERING

Mixed fertilizers are satisfactory for blackberries. For best results, apply fertilizer in early spring when growth starts and again in summer just after harvest. Use a 10-

10-10 commercial fertilizer mix or a 10-6-4 mix at the rate of 5 pounds per 100-foot row.

For late-ripening varieties, such as Smoothstem and Thornfree, apply the fertilizer mix no later than July. This is to avoid forcing a late season growth that will be subject to winter injury.

For the first year or two, before the root systems of the plants develop fully, spread 3 or 4 ounces of the fertilizer mix in a 12-inch radius around the base of each plant.

Blackberry plants require plenty of moisture while the berries are growing and ripening. The amount of water needed is roughly equivalent to 1 inch of rainfall per week. Irrigate sufficiently to meet this requirement.

Mulching reduces the frequency of watering. Good mulch materials include: seed-free straw or prairie hay, pine needles, corn-cob, wood chips, or cotton hulls. Lawn clippings are not satisfactory.

CULTIVATION

Blackberry plants need thorough and frequent cultivation; weeds and grasses compete for moisture and are difficult to control.

Cultivate thornless blackberries during the summer, and as often as necessary to keep the weeds down. To avoid harming shallow roots of the plants, cultivate only 2 or 3 inches deep near the rows. Unnecessary pruning of roots stunts plant growth.

Discontinue cultivation at least a month before freezing weather begins.

Cover Crops

Winter cover crops planted between the rows help to maintain the structure of the soil, and reduce erosion. If a legume cover crop is planted, valuable nitrogen will be added to the soil.

Sow cover crops during the fall. The following cover crops are adapted to thornless blackberries: field rye, vetch (a legume) and rye, and spring oats.

Drill or broadcast the seed by hand between rows. Plant at least 18 inches away from either side of the row to allow air circulation for the blackberry canes on the ground.

Herbicides

Herbicides can be useful, especially in large plantings. Control recommendations depend on soil types, and weed species in various areas. Contact your county agricultural agent or State Agricultural Experiment Station for local recommendations.

HARVESTING

Blackberries that are picked at the proper time, handled carefully, and stored in a cool place will stay in good condition for several days. Overripe or injured berries spoil quickly.

Harvest thornless blackberries at least twice a week, but do *not* pick thornless blackberries as soon as they turn black. It is better to wait 3 or 4 days and pick when the color has a dull appearance. This will assure a better flavor, color, and wholeness, especially if you are canning the berries.

Remember the following when harvesting the berries—

- Pick berries in the morning while the temperature is still cool. Blackberries picked in the morning do not spoil as easily as those picked in the afternoon.

- Pick carefully and do not crush or bruise the fruit when placing them in berry baskets.

- Pick when the berries are fully ripened and firm.

PREVENTING WINTER INJURY

Winter protection is needed for blackberries in areas where winter temperatures are expected to go below 10° F. Cold-hardy varieties, however, need no special protection in the winter.

In areas with low winter temperatures and cold, drying winds, cover the canes with a layer of soil, straw, or coarse manure. This should be done after the canes have become dormant, and before the onset of severe cold weather. Remove this protective layer before growth starts in spring.

Where winters are mild and moist, such as in western Oregon, canes of trailing varieties left lying on the ground will be damaged. It is best, in areas with similar conditions, to tie the canes to the trellis in early fall and allow them to stay up through the winter. However, in areas with severe drying winds, canes tied to trellises are subject to winter injury.

DISEASES AND INSECTS

Diseases and insects vary in kind and severity from area to area. For information suited to your local con-

ditions contact your county agricultural agent or State Agricultural Experiment Station.

To keep disease and insect damage to a minimum—

- Choose disease-resistant varieties adapted to your area.

- Destroy diseased plants.

- Remove old canes soon after harvest.

- Remove all wild blackberry plants in the vicinity of your garden.

- Prune out and burn canes that have been infested with insects.

- Keep the garden free of weeds and fallen leaves.

DESCRIPTIONS OF THORNLESS BLACKBERRIES

The thornless blackberry varieties that follow are listed in their approximate order of ripening. Specific ripening dates will vary with location and season. All the varieties are partly susceptible to winter damage.

The variety descriptions include: the degree of hardiness (four degrees are given: Hardy, moderately hardy, less hardy, and tender); the duration of harvest; the characteristics of the plant; and the area of special adaptation.

For local variety recommendations consult your county agricultural agent or your State Agricultural Experiment Station.

Thornless Logan.—Less hardy; harvest period is 10 to 15 days; berry large, long, reddish, acid, high flavor; plant is vigorous, very

productive. Grown on Pacific coast. Not adapted to East.

Austin Thornless.—Moderately hardy; harvest period is 10 to 15 days; genetically thornless, berry is large, round, black, good flavor; plant is vigorous but only moderately productive. Widely grown in the South.

Thornless Young.—Moderately hardy; harvest period is 10 to 15 days; berry large, soft, wine colored, very sweet; plant is vigorous and fairly productive. Adapted in the South and Pacific States.

Cory Thornless.—Less hardy; harvest period is 10 to 15 days; berry large, black, sweet, soft; plant is vigorous and fairly productive. Grown on Pacific coast.

Thornless Boysen.—Moderately hardy; harvest period is 10 to 15 days; berry large, soft, wine colored, very sweet; plant is vigorous and fairly productive. Adapted in the South and on Pacific coast.

Thornfree.—Hardy, harvest period lasts for about 1 month; genetically thornless, berry medium, firm, black, good flavor; plant is notably healthy and very productive. Grown in central New Jersey, southern Pennsylvania, southern Ohio southward to North Carolina and west to Arkansas, and in the Pacific Northwest.

Smoothstem.—Moderately hardy; harvest period lasts for about 1 month; genetically thornless, berry medium-large, black, good flavor; plant is extremely healthy and vigorous, very productive. Adapted from southern Maryland to North Carolina along Atlantic coast.

Thornless Evergreen.—Hardy; harvest period lasts for about 1 month; berry is large, exceptionally firm, sweet, black; plant is vigorous, productive, and healthy. Best adapted to Pacific Northwest.

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